

THE ATARI 8-BIT NEWS-PAPER

Previously published on disk as the Atari 8-bit News-Disk

£1.50

Issue 17 - March/April 1994

HAPPY 3rd BIRTHDAY
TO THE NEWS-DISK
AND NEWS-PAPER!

- * GAMING COLUMN
- * YORKY - MORE DETAILS
- * QUICK REVIEW
- * QUICK TUTORIAL PART 2
- * P.D. REVIEWS
- * AND MORE!



PUBLISHED IN THE U.K BY:
DEAN GARRAGHTY SOFTWARE

CONTENTS

Issue 17 - March/April 1994

* * * * *

SUBSCRIPTIONS

The Atari 8-bit News-Paper is currently offered on a 4 issue subscription at the following rates:

U.K. ----- £6.00
U.S.A ----- £10.50 (or \$21)
Europe ----- £8.00
Rest/world - £13.00

U.K payments by cheque/P.O.
U.S.A payments either by IMO in UK pounds, or in US\$ in cash as shown. Europe and rest of world pay by IMO in UK pounds.

SUBMISSIONS

We welcome submissions from readers. They can be on any Atari-related subject. Please submit your articles on disk in ASCII format (i.e. no special word processor commands should be in). We "pay" for articles in free PD disks from our library. We usually pay around 3 disks per article.

The Atari 8-bit News-Paper is published in the UK by Dean Garraghty Software. It is edited by Dean Garraghty. Regular contributions from: Richard Gore, Alan Hitchen, and Brian Walker.

Cheques, etc. should always be made payable to: D.G.S. Advertising space is available at very reasonable rates. Please phone for details.

The "News-Paper" is not connected to Atari in any way. It is an independent publication. Atari is a registered trademark of Atari Corp. All other trademarks will be noted.

Opinions held by the contributors are not necessarily those of the editor and publisher. Editorial address:

D.G.S NEWS-PAPER, 62 THOMSON AVE, BALBY, DONCASTER, DN4 ONU, ENGLAND.
Phone: (0302) 855026

Editorial	3
Gaming Column	4
by Richard Gore	
Yorky Article	7
by Richard Gore	
QUICK Article	10
by Richard Gore	
QUICK Tutorial Part 2	13
by Dean Garraghty	
Games and Things	15
by Brian Walker	
A Statement	16
by Brian Walker	
Public Domain Reviews	17
by Alan Hitchen	
The VTOC and Me	19
by Alan Hitchen	
Demo Maker Review	20
by Alan Hitchen	
NOTE: Don't miss the back cover!!!	

EDITORIAL

By Dean Garraghty

Welcome to issue 17 of the News-Paper. Yes, we're still here!

I'm sorry that the News-Paper keeps being consistently late. Other things usually seem to take priority, and eventually the News-Paper gets ignored until I suddenly realise that another issue is due and then it's panic stations! Anyway, it's here now!

We are now very close to the SAMS show on 16th April 1994 at Bingley Hall, Stafford. This is the first time an AMS show has been held in April, and I think we are all a little worried about how well it will go. As you all know, AMS7 was a great disappointment for us, and we are very much hoping that SAMS will be better. However, we have decided to take a smaller stand this time (12 foot) and will probably take less stock. By keeping costs down, we should be able to make the day more of a success. We also need lots of people to come along. Part of AMS7's problem was that there seemed to be very few people there. I strongly believe that the very bad weather had a lot to do with this. The weather in mid-April is usually a lot better, and the mornings and evenings are a lot lighter this time of the year. Hopefully this will persuade more people to come along. Please come along to SAMS and show your support. See you all there!

I am pleased to report that nearly everyone who needed to re-subscribe after the last issue has done so. I have also picked up a few more subscribers as well. This means that the News-Paper can now continue for at least another 4 issues.

Don't forget that we are still looking for articles for the News-Paper. We are now the only Atari publication that offers some form of payment for submissions, so send them to us first!

We would like to start a free "contact" column in the News-Paper for people wanting to sell items, or people looking for things. Send any adverts to us for free publication. Maximum 50 words please! People wanting large adverts are advised of the following rates: 2 page spread @ £10, single page @ £6.

That's all for now. Keep buying from DGS, keep reading the News-Paper, send us some articles, and come along to SAMS. That'll make me happy!

News just in: Atari Classics magazine is to cease publication later this year. They blame this on a lack of subscribers. Only two more issues will be published: Feb and April 1994. Any money owing will be refunded, except when it is less than \$5. However, there is interest in taking the magazine over from several parties, including DGS. More news when we have it.

GAMING COLUMN

by Richard Gore

Welcome once again to another feast of games reviews. Well actually this one is going to be less of a feast and more of a snack but I hope you'll like it all the same.

Well due to financial constraints (i.e lack of cash), I haven't actually purchased any new games for a while. However, I have aquired a copy of Taskmaster, a tape to disk conversion program with many added features newly re-released by DGS on behalf of RAMBIT (the company behind the Rambit Turbo tape upgrade, Print-File - a printing utility, and the PPP Printer Interface). I haven't had time for a full test of it but I will let you know my first impressions. However, I would like to start the article with a round-up of several games that can be controlled via an ST mouse plugged into your trusty 8-bit Atari - there are more than you would think!

Okay, perhaps the most recent mouse compatible game has to be The Brundles, a clone of the very popular game Lemmings (see my Gaming article in issue 16 of the News-Paper for a full review). The Brundles has options to be controlled with either an ST or Amiga mouse as well as a joystick or an Animation station, that's pretty comprehensive! Well needless to say it works pretty well, the cursor moves as you would expect so there's nothing to complain about. However, if you read my article in issue 16 of the News-Paper you will have read about the fact that only 60 of the 100 levels are ready at the moment, and there appears to be a bug in the RAMdisk level feature. Well after further investigation I can tell you as of mid-January that the full 100 levels are not yet completed but Derek Fern (the UK distributor) tells me he will let people know via New Atari User and his own price list/newsletter when they are ready, and also people who have already bought their copy can return their master disks to Derek for a free update. The RAMdisk bug is a little more of a problem, it works fine with a 256K machine but not with a 128K machine (130XE). Ke-Soft have been made aware of the problem so hopefully it will be fixed soon.

The game Shanghai (a version of the ancient Chinese game 'Mah Jongg') was produced by Activision in 1986, and according to the packaging it was made in the UK. However, until recently it has only been available on the Continent, mainly Germany. The version I have even has German packaging but all the text in the game is in English and detailed rules are included, accessed like all the game's options via 'pull down menus'. Basically you have to find matching tiles and remove available pairs until there are no more left. The graphics are hi-res mono, with coloured sections to help you distinguish between layers. This game's appeal has always been its playability and Shanghai doesn't fail to deliver that. There are many variations on the traditional game including a multiple player feature and set time limits. There are one or two annoying points though. For instance, if you want to start a new game, even when the old one is finished, you have to press Reset. Okay, so it's not fatal but it's not very professional and should you accidentally invoke the mouse option there's no way to turn it off without a mouse, apart from re-booting. Even though it was made in 1986 there is an option to use a ST mouse (as you would guess by its inclusion in this article) plugged into port 2 of your Atari instead of the usual joystick (in port 1). The sound department is very lacking but if you like puzzle games Shanghai is one of the best around - if you can find a copy.

Another classic game is Minesweeper from PPP in Germany, UK distribution by DGS. If you are a PC user (shame on you and me) then you will no doubt be aware of this game especially if you have Windows (no not those transparent things to let light into your house). For those uninitiated, you basically have to uncover all the squares in a grid without uncovering any bombs; a square may contain a number which tells you how many bombs there are in the eight (less if it's at the edge of the grid) squares immediately surrounding your chosen square. Some squares are blank and have no bombs around them. By examining these numbers and blanks it should be possible to calculate which squares have bombs in them and you can mark them accordingly, sometimes though (especially at the start of every game) it's down to luck as to what you uncover. Minesweeper sounds very simple, and indeed it is, but it is criminally addictive. I have spent many an afternoon playing the PC version on the university's machines instead of doing more important things. The 8-bit version retains all the playability of the PC version, but loses some of its graphical appeal. Still it's great to play and even quicker with a mouse which the 8-bit version does support, as it should since it is written in Quick, an excellent programming language (see my in-depth review elsewhere within this issue) which has in-built commands for mouse control.

The SAM (Screen Aided Management) system (also from PPP in Germany) also has support for a mouse. Basically SAM provides a graphical environment similar to GEM on the ST, that allows you to control the usual DOS menu functions, have an 80 column display, and use it for writing letters, articles etc. Coming soon are a whole range of extra utilities including a drawing program, and all with mouse control.

Well there endeth my tour of mouse software. I've no doubt there are more programs out there with mouse support. I seem to remember BaPAUG had a PD disk with a mouse controlled painting program on it, but I don't know the current situation as regards their activities since the demise of their newsletter 8:16. If you don't already have a mouse and are considering buying one they are readily available. You should be able to get a decent quality mouse for about £15, just take a look in a recent issue of Micro Mart. Make sure you get an Atari ST compatible one and NOT an IBM-PC serial mouse, don't let anybody fob you off saying they are the same thing because they aren't and a serial mouse will NOT work with your 8-bit Atari. Many mice (not the furry ones!) are ST/Amiga switchable; these are fine so long as you switch them into ST mode, this is usually done with a small switch somewhere on the underside of the mouse. Oh and yes, a mouse mat is usually a good idea as well, they are only a couple of pounds and help to keep your mouse clean as well as providing you with more accurate control.

All of the software mentioned above has been released on disk. However, Minesweeper is also available on Rambit Turbo tape.

That's enough about rodents, onto Taskmaster. This program aids the conversion of tape programs to disk (from your original tape for personal backup purposes only). You have to load the program and then using the menu commands load your cassette game into memory and save it out to a Taskmaster menu disk. There is also a mini disassembler included so you can modify the program and alter run addresses for those awkward programs that won't run immediately. There's no doubt this is a pretty powerful tool but there are one or two annoying points. Firstly there is a lot of disk swapping. Every time you select a command the code required for that command has to be loaded from disk and there is no command for creating the menu disks. You have to

use a freshly formatted disk and then when you save a file out to that disk, Taskmaster will automatically create the menu system for you. Once you have saved your tape games to disk, you simply boot the disk and select which game you want to play, it will then be loaded and run (if the conversion process worked okay). There are several plus points; the menu appears very quickly, printed documentation is supplied along with help files within the program itself, and if you know what you are doing almost any game can be transferred.

In conclusion, if you need a powerful tape to disk utility, want more flexibility than Transdisk, and understand something about run addresses and boot sectors etc., then this is the utility for you. It's available from DGS priced at £4.95.

Well that's the end. It did rather turn into a feast after all, oh well, a bit like Christmas really. Bye for now.....

Trademarks:

Windows is a Trademark of the MicroSoft Corporation.

Mice and Mats:

DGS has recently moved into the supply of general consumables, and we are able to supply both ST mice and mouse mats. We currently have plenty of mats in stock, but we don't currently stock ST mice. However, we can get them! As with all trade suppliers, we have to buy in batches of 10 at a time. If there are 10 people out there who fancy an ST mouse at a good price then let us know. If we get enough people wanting them, then we will order some. Prices will be: £13.50 for the mouse, £15 for the mouse and a mouse mat, £2 for the mouse mat alone. These prices include P&P. The mice are ST/Amiga switchable.

D.G.S General Supplies

We now stock a range of general computer supplies at quite reasonable prices. We currently stock 3.5" Double and High Density disks, both branded and unbranded, along with mouse mats and disk boxes. All these items are *top quality*, none of this rubbish you get at shows and things!

Example prices:

Unbranded DD 3.5" disks from 29p each.	}Prices based on quantity.
Branded HD 3.5" disks from 55p each.	}Delivery extra.
Branded DD 3.5" disks from 40p each.	}

Lockable 100 capacity 3.5" disk boxes £6.50 each (inc. delivery). Order two or more and the price drops to £6 per box including delivery!

Mouse mats (red, grey, or black): £2.00 each (inc. delivery). Order 5 or more and the price drops to £1.75 each including delivery.

Phone for the latest great prices on: (0302) 855026.

THE YORKY - MORE DETAILS!

By Richard Gore

This article will hopefully introduce you to a product you may not have heard of before - The Yorky 256K memory upgrade.

About a year ago I was having a phone conversation with a chap you may all know, and we ended up talking about memory upgrades. I was told about a chap at the University of York who had devised a memory upgrade called the Yorky, and it simply plugged into the PBI port of an 800XL. I had heard of this product before, and in the past I had seen advertisements for it but at £80 it was a bit too expensive. However, it just so happens that I am a student at the University of York and after a few days of searching and E-Mailing various people around the campus, I located the man himself - Dave Malham a lecturer in the Music Technology group. After a few conversations and discussions with the original vendor (Dave only designed and made the Yorkies), I aquired the rights and a few spare parts so I could manufacture and sell the Yorkies. After purchasing a few missing parts and spending the best part of a weekend soldering, I finally had a working Yorky that I had made myself (I also had the original prototype to work from). One of my ambitions had come true, now all I had to do was advertise and sell them. Not as easy as it sounds, I placed my first advert in DGS's now extinct News-Disk (note: a follow up, the News-Paper, is now available) and it got a massive reply, well err actually two people responded, one actually bought a Yorky, the other just wanted details. Next I advertised in New Atari User. That got a few more replies and I sold one to a guy in France and one to a chap in the USA. After I found out they worked fine in those countries I started putting adverts out over the Internet and that's when Ben Poehland (the editor of Atari Classics) became interested and bought one.

I had quite a few replies but each one wanted the Yorky to do more and more things, like be upgradable to 1Meg, work with the XE series of computers and make the coffee (well not quite!). The Yorky was designed when a UK national electrical chain (Dixons/Currys) was selling bundled 800XLs at very reasonable prices. One Christmas they reported sales of 100,000 units, where are they now? Anyway, it was envisaged there would be a large demand from XL users for memory upgrades and so the Yorky was born. The developer then started work on making it 130XE compatible. Some preliminary work had already been done - hence the spaces on the PCB for more components, but it certainly wasn't fully functional. Then the bottom really dropped out of the 8-bit market, (the question I ask myself is was the bottom ever there?) and further development ceased until five or so years later when yours truly appeared!

So that's why the Yorky is not XE compatible, and in those intervening years some of the development documentation has vanished, unfortunately all the details on XE compatibility went. At the time of development there was no standard for 1Meg applications, well not in the UK, so to implement it now would take a complete redesign of the PCB and more costly development work, and from the sales of Yorkies so far I can see straight away this would be financial suicide so I'm afraid the Yorky is stuck with being 256K, but isn't that enough for you? How many programs support 1Meg? However all is not lost, even as I write this article in late December I am working on several improvements, these include:

- 1) A battery backup facility
- 2) A PBI feed through port
- 3) An in-built Centronics printer interface
- 4) That all important XE compatibility

Whether or not these actually arrive will depend on many factors, far too numerous to list here but should any/all of them arrive you will be informed. Watch this space, as they say.

Now that I have whetted your appetite I will describe what the Yorky is and what features it does have and hopefully convince you that the Yorky is THE memory upgrade for the 600/800XL!

The Yorky plugs into the PBI port of an Atari 800XL or a 64K internally upgraded 600XL (unfortunately it will not work with the 400/800 or 1200XL since they don't have a PBI or any of the XE series of computers as they don't have all the signals required!) and gives you 256K of XE compatible bank-switched memory.

No user memory is lost as everything is provided on the professionally made PCB. The only thing missing is the support for 'ANTIC ONLY' access mode to the extended memory, but this can be added by a simple solder connection inside the computer. However, this mode is very rarely used and I am yet to find a piece of commercial software that doesn't work with the Yorky. I have tried AtariWriter Plus, Bop N Wrestle, Ace of Aces, and various PD programs. Should you come across any programs that don't like the upgrade being present (Mission Shark is one example) you simply flick a switch and you're in non-upgraded mode returning your 800XL to its standard form without actually unplugging the upgrade from the PBI. Details on how to perform the solder connection upgrade will be supplied to registered owners free of charge on request.

The Yorky is supplied with an A4 manual describing installation and use, and a double sided disk (PD) of software for use on 256K machines. They are also guaranteed for 3 months from the date of purchase.

The price, well they aren't cheap but I think they are priced reasonably;

£50 + £2 for postage and packing (UK),
 + £3.50 in the rest of the EC,
 + £5.00 in the rest of the world (airmail).

However, I understand the problems of obtaining Money Orders, etc., so I can accept payment in US\$, the current price is \$90 (all inclusive) but this may change as exchange rates change. This is only available for buyers living outside of the EEC.

I can also sell you one without the DRAM chips. It uses 6 64x4 (41464) DRAM chips which you may be able to supply yourself. Price without DRAMs is £40 including P&P.

The Yorky has been tested on UK, US and French systems and works fine!!

I do have a small stock of Yorkies available now, however once this stock has gone I doubt it will be replaced because of the high cost of small scale production and sales figures so far certainly do not

warrant mass production. There has been a little bit of interest in mass production from a major US supplier but this seems to have diminished recently due to the lack of XE compatibility as outlined above.

It seems a shame that a great product will soon be lost forever, so buy yours now while you still can!

FEBRUARY UPDATE: Since I originally wrote this article there have been several updates so here goes:

There is no chance of the Yorky being sold in the US, the deal never emerged, so I'm afraid once my present stock has gone the Yorky will be lost forever! The good news, well we have nearly got the PBI feedthrough working, well it does work with the Ramba PPP interface but it still needs further testing, say on a black box. It is likely the cost will have to increase to allow for the extra parts needed but I will try and keep this small. More details will be available when everything is finalised. The Yorky still will not work with a 130XE, and the other development projects have been abandoned, however Ramba do have some printer interfaces that plug into the PBI port so you can still effectively have a printer interface and a Yorky on the PBI so long as you get a Yorky with PBI feedthrough!

I can be written to at:

Richard Gore, 79 Sprotbrough Road, Sprotbrough, Doncaster,
 DN5 8BW, ENGLAND

or E-Mailed at RG9@UK.AC.YORK.VAX or RG9@UK.AC.YORK.TOWER

The YORKY

Yes, it's still available, but in dwindling quantities. The Yorky 256K memory upgrade simply plugs into the PBI port of your 800XL or 64K internally upgraded 600XL to give you 256K of XE compatible bank switched memory. No soldering is required and you don't have to open your computer. It is supplied with an A4 manual and a double sided disk of support software. It has been tested on US, UK and French computers and works fine.

Price: £50 plus £2 p&p (UK), £3.50 (EC), £5 (worldwide), or for USA buyers \$90 (in cash) fully inclusive.

For more information contact:

Richard GORE, 79 SPOTBROUGH ROAD, SPOTBROUGH, DONCASTER, DN5 8BW, ENGLAND.

Telephone: (0302) 784642 weekends only please.

E-mail: RG9@UK.AC.YORK.TOWER or RG9@UK.AC.YORK.VAX

STOP PRESS! STOP PRESS! STOP PRESS! STOP PRESS!

The Yorky will be available at SAMS (Bingley Hall, Stafford) on the 16th of April 1994.

By then we also hope to have a PBI feedthrough working so users with other PBI devices, say the Black Box, can plug them into the back of the Yorky. Full details will be available soon.

Quick - A More Comprehensive Story

By Richard Gore

Quick has been around for several months now in the UK (and several years in Germany) but there seems to have been very little said about it. What has been said is just re-vamped advertising blurb. I intend to present a much fuller coverage of the language, its advantages, disadvantages etc., and I will also include some programming hints and some corrections to the manual that came with your Quick disk.

For those that haven't heard of Quick, it is another language (disk based) for use on your Atari 8-bit computer. Quick is a structured language and mixes elements of Basic (standard and Turbo), C, assembler and probably numerous others, however it is a language that needs to be compiled. This means you write your code using the supplied editor much the same as you would a Basic program, but then you use the supplied compiler program to turn your code into 100% machine code for incredibly fast running speed. This is obviously much more complex than simply typing 'RUN' from Basic but the increased speed is a really great advantage. For example, I am writing a program that involves using a joystick to move a player/missile graphic (PMG) across the screen. Coding it in Basic results in slow jerky movement, however when I coded it in Quick I moved the joystick and the PMG jumped to the other side of the screen! There's a bug I thought, but no, I re-checked the code and everything seemed fine. So I inserted a delay loop after each movement and lo and behold it worked just as I had planned. What was happening was the PMG was moving too fast for the human eye to see! So Quick works fast, many programs will therefore require some delay loops to slow things down but that's much better than having things far too slow with no way to speed things up!

There are, of course, other problems with a compiled language. For a start you are only told of errors when you compile your code, or your program might compile fine but then not run properly. De-bugging is not easy and usually involves re-loading the compiler and trying again. Fortunately, Quick uses the memory underneath the OS and some memory near the bottom of free RAM and stores both the compiler and editor in memory at once, and provided your program doesn't corrupt any of this memory space you can usually return to the menu area by pressing the Reset key whilst your program is running. From this menu you can either go to the editor, the compiler, or DOS. If you use Quick on a 130XE or a compatible 128K plus machine (Yorky upgraded XLs work fine) you can use the standard Atari RAMdisk to load, save and compile to; this massively speeds up the compiling process. Once you are in DOS, which you might need to do to format disks, copy files to the RAMdisk etc. (especially useful for library or data files to speed up compilation or initialisation of your program) there is no quick (no pun intended) or easy way to get back to the shell (the small menu area where you select editor, compiler, etc.). You have to insert your master disk in drive one and use DOS option L to load the AUTORUN.SYS file on the master disk. Once this has loaded you will be back at the shell prompt.

A memory map showing the free and reserved areas of memory is included on page 41 of the manual, this is very useful so you know where to store character sets, PMGs, etc. However, a quick look at this map shows one very important point. The run-time code which is added to every Quick program is located in pages \$4100 to \$4FFF (decimal locations 16640 to 20479) and must not be moved as it is required for almost every command

executed. What's the problem? Well that's right at the start of the area of memory used for bank switching on a 130XE (or compatible), so although the RAMdisk will work (as that's effectively controlled by DOS) XE type bank switching cannot be implemented. That's a real shame as those extra banks are a great place for storing digitised sound data (compiled Turbo Basic programs also have this flaw!). However, all is not lost. Harald Schoenfeld (the author of Quick) tells me a patch program is available that will modify your master disk to correct the problem and also a multitasking program is available that allows each separate program to reside in a 16K XE memory bank. Unfortunately, these programs are still in German but Harald tells me he does plan to translate them into English at some stage.

Okay, I will now summarise what I think the major points are about Quick: it is a compiled language, with many unique and powerful commands, offering vastly increased speeds over Basic. The compiling/editing system is very well implemented, even though the editor has a couple of minor niggles - nothing serious though. The down-side, well as with all compiled languages de-bugging is not the easiest thing to do and can be quite time-consuming. Also XE bank switching is not (yet) supported. I would recommend Quick to any prospective programmer. However, you can't just sit down and expect to produce a masterpiece, you have to control how you use the free memory and a sound knowledge of Basic and the important memory locations, for example 560,561 for display lists etc., are very important, as is careful planning of your program. If you can do this then you should have no problems producing some top quality programs using Quick.

Now for those programming tips I promised.

Variables are important in any language. Quick has two major types, 'BYTES' which can take any integer value between 0 and 255 inclusive and 'WORDS' which can take any integer value between 0 and 65535, although there is a library (MATH.LIB) supplied with Quick that allows the use of floating point (decimal) numbers, but that topic is a bit too complicated for this article! BYTES and WORDS can also be global, which means they can be used throughout the entire program, or local which means they can only be used within the subroutine (Procedure) they are defined in. Look at the following piece of code:

```
BYTE
[
  X, Y
]
WORD
[
  NUMBER
]

MAIN
  X=2
  Y=200
  PRINT("X = ",X)
  PRINT("Y = ",Y)
ENDMAIN
```

The definition before 'MAIN' means the variables X and Y are global BYTES and NUMBER is a global WORD.

The commands 'MAIN' and 'ENDMAIN' are very important. They indicate

the start and finish of your main program. You can call procedures (subroutines) from within MAIN (or indeed from within another procedure) but they are a topic for another article. What do the other commands do? Well get your Quick disk and manual out and try them. It's advisable to keep your manual handy at all times and keep checking you are using the correct syntax for each command. If you don't understand how a command works, re-read its description in the manual slowly and carefully and try it again until it does work. Only be perservering will you become proficient in Quick.

Now onto something more advanced and a correction. Look at the top of page 19 of your manual. It should say PLAYER(Z,I,L,S) but in some manuals the Z might be a D, which makes the following few lines in the manual a bit confusing. That's a minor typo problem but now turn to page 26, the page that deals with VBIs and DLIs. I had a few problems understanding this section and in getting my DLIs to work. After a chat with Harald he advised me the code in the manual might not work. You should never use variables that contain Quick keywords. The following piece of code (kindly supplied by Harald) should work for all VBI applications:

```
INTER TEST
LOCAL
WORD
[
  SP, OP=130
]
BEGIN
IPUSH
ZPUSH
SP=OP
.....
OP=SP
IPULL
ZPULL
ENDVBI
```

where TEST can be replaced by the name of your VBI and should be replaced by the code you want to be used as the VBI, this of course can be more than one line!

For DLIs you must also include the command PUSH immediately before IPUSH, and then PULL immediately before IPULL but after OP=SP, and change ENDVBI to ENDDLI. Also some of the above commands may not be necessary; it all depends on exactly which commands you use inside the DLI, check out the manual on pages 26, 27 and 28 for more details. The above code should enable you to get to grips with using DLIs and VBIs in Quick, if you are in doubt as to which commands are necessary use the outline as above; it should work with all applications. Harald does tell me he has experienced the occasional problem when using page zero from within VBIs, so it would be best if you avoided that too.

Well that concludes my tour of Quick. I hope it encourages a few more of you to buy it and those that have bought it to use it. Remember should you produce any programs in Quick I'm sure DGS would love to see them with a view to their possible publication.

QUICK Tutorial Part 2

By Dean Garraghty

Last time we looked at how to implement a FOR...NEXT loop in QUICK. This time we'll get a little more advanced and look at string handling and ARRAYS. Simple graphics will come in Part 3 next issue!

In Basic, a string is simply defined at the start of the program by using the DIM statement, followed by the variable name and its maximum length. E.g. DIM TEST\$(20) would create a string called TEST which could hold a maximum of 20 characters. QUICK handles strings in a similar, but suprising, way. In QUICK a string is actually treated as an ARRAY. Why is this? Well, a string is basically an array of individual characters. Most procedural programming languages work this way. Again, Basic is a bit of a black sheep! Consider these two programs which do exactly the same thing:

Basic

```
5 DIM NAMES$(20)
10 PRINT"ENTER YOUR NAME"
20 INPUT NAMES$
30 PRINT"HELLO ";NAMES$
```

QUICK

```
ARRAY
[
  NAME(20)
]
MAIN
  PRINT("ENTER YOUR NAME")
  INPUT(NAME)
  PRINT("HELLO ",NAME)
ENDMAIN
```

As you can see, the QUICK version uses an array to hold the string. In Basic we use the \$ symbol to denote the variable as a string. In QUICK we don't do this. ARRAYS are not only used for strings in QUICK. They can be used to hold data as well. Consider these two programs, which do exactly the same thing:

Basic

```
10 DIM NUMBERS(9)
20 RESTORE 70
25 FOR X=0 TO 9
30 READ TEMP
40 NUMBERS(X)=TEMP
50 NEXT X
55 FOR Y=0 TO 9
60 PRINT NUMBERS(Y)
65 NEXT Y
70 DATA 1,2,3,4,5,6,7,8,9,0
```

QUICK

```
ARRAY
[
  NUMBERS(10)
]
BYTE
[
  X
  TEMP
]
MAIN
  DATA(NUMBERS)
  [
    1,2,3,4,5,6,7,8,9,0
  ]
  X=0
  TEMP=0
  WHILE X<10
    TEMP=NUMBERS(X)
    PRINT(TEMP)
    X+
  WEND
ENDMAIN
```


You should, hopefully, be able to follow the Basic code. Now let's discuss the QUICK code. First of all we have to define an ARRAY variable to hold our data. We will call this NUMBERS, but we could have called it almost anything. Basic and QUICK differ when defining ARRAYS. The ARRAY in our case is to hold 10 numbers. In both Basic and QUICK these numbers are internally indexed 0 to 9. That means the first number of the ARRAY is actually cell 0. In Basic we define NUMBERS with DIM NUMBERS(9), but in QUICK we define NUMBERS as an ARRAY of 10. This is where Basic and QUICK differ. However, when using the array, Basic and QUICK are the same. In our example, the number 5 in our array is actually accessed by NUMBERS(4).

QUICK has a facility for loading data straight into an ARRAY, but Basic hasn't, so you have to use a FOR...NEXT loop. In QUICK we used DATA(NUMBERS) followed by our data list contained in []. All we had to do then was print the ARRAY to the screen. This was done using a WHILE loop. TEMP is a temporary variable used to hold the contents of each cell of the array before printing. Notice WHILE X<10, because the cells are numbered 0 to 9.

When you run the QUICK program you will notice that the numbers appear on the screen straight away, but the Basic program takes a bit of time before the numbers appear!

I've gone through quite a bit this issue, so I'll let your head have a rest now! As usual, the best way to understand all of this is to get your QUICK disk out and have a fiddle! See you next time!

Dean Garraghty Software
FOR ATARI XL/XE SOFTWARE!

Slight price increases: QUICK is now £13.95 or £18.50 with the support disk. SAM is now £13.95. Sorry about this.

* NEW * For SAM users: SAM BUDGET - a spreadsheet program. Uses 80 columns, as well as mouse or joystick input. Requires SAM.
Price: £6.95

* NEW * For SAM users: SAM Utility Extensions 1. Contains SAM Convert to convert text files to and from SAM Texter format, and SAM Creator to convert picture files to and from SAM Painter format. Requires SAM.
Price: £3.95

* MAZE GAMES 1 * We have now combined Jawbreaker and Mousekattack as one pack which now costs £6.95 on disk, standard tape, or Rambit tape.

All prices quoted include P&P. For a free copy of our full 25 page catalogue, send 2x19p stamps. Non-UK customers send 3 IRCs. Plenty of used hardware/software in stock. Phone or send a SAE.

D.G.S., 62 THOMSON AVE, BALBY, DONCASTER, DN4 0NU, ENGLAND
Phone: (0302) 855026. International: +44-302-855-026

Games and Things

By Brian Walker

ARGH! Nearly did it. Nearly made the high score table. Maybe next time.

There are still excellent games being produced for the Atari 8-bit, shoot-em ups, strategy, puzzle, graphic adventures, but at demoralizing times like this I often open up my games drawer and pull out one of the first games I ever bought many years ago: Computer Aquire from Avalon Hill.

Primitive by today's standards, in fact thinking back, it was quite primitive for the time. Plain blue Graphics 0 screen with a 12x10 grid numbered 11 to 129, probably a straight conversion from an old Tandy TRS-80 program.

At the beginning of the game the computer allocates six numbers (generated at random?) and six thousand dollars to each player. Each player, human and computer, takes it in turn to "activate" a number on the grid. The computer then allocates another number to each player so that each always has six to choose from. If the computer plays e.g.26 and you have an adjacent number e.g.27 then, if you wish, you can start a hotel chain.

No flashy graphics here, an hotel chain is represented by a letter: C for Continental, F for Festival, W for Worldwide etc. upto a maximum of six chains. Both players can buy upto three hotels per turn from any activated chain. The price of each hotel depends on which chain it belongs to and how many hotels are already in the chain.

As the game progresses, one chain can take over another chain depending on which chain it is and who owns the most hotels in the chain. This generates cash enabling the successful player to buy more hotels. When there are no more numbers left to play the player with the most cash wins.

It doesn't sound too thrilling and to be honest it can be a tiny bit tedious in the early stages. So why do I still bother to play it? It's because I CAN BEAT THE COMPUTER!

In fact this was the first game I played in which I could actually beat the computer. Don't get me wrong, it isn't so easy that it's not satisfying to play. There is an element of strategy involved, and play a sloppy game and the computer will always beat you.

That's playability. Not so hard that the game gets frustrating but not too easy and not too many random factors involved to make the game boring.

Other old games I often still play for the same reasons are Archon, Hearts 1.5 and I think my favourite of all is M.U.L.E. Very subtle gameplay with (three) tough computer opponents. But I can still win!

This seems very sycophantic but honestly, of the more recent games to appear the one I play the most is Minesweeper, which I bought from Dean. I know that there are other versions of the game available but I've not had access to them so I don't know how they compare. I do know that this version meets all my requirements regarding playability and it has the option of mouse control as well as joystick. I use a mouse

which makes the gameplay even faster and smoother. My fastest time for Level 1 (10 mines in an 8x8 grid) is 1 minute and 6 seconds and for Level 2 (40 mines in a 16x16 grid) is 5 minutes and 52 seconds. But I can do better. I know I can. Now, just one more try.....

A Statement

By Brian Walker

Yes, it was noticable that fewer people attended AMS7 than previous shows. It could be because of the bad weather, but it's been bad before. It could be because there are fewer Atari supporters. This is no doubt true, but although there is always a large Atari contingent present the event is not Atari specific. The vast majority of the vendors either support other computers or sell general items such as blank disks, printers, monitors, etc.

No, I think the economic situation is to blame. In spite of a supposed economic recovery, many people are still either unemployed or frightened of becoming unemployed. In addition to this the Chancellor's November Budget was imminent and we had been told many times that because of the chronic Balance of Payments deficit it was going to be a harsh one. I think people were very apprehensive about spending money just before Christmas.

Perversely, you didn't need to go with much money to come away with a lot. Of course there was the older software and hardware at bargain prices, but more importantly NEW software and hardware at bargain prices. It would be a tragedy if producers and suppliers were to become discouraged from making the many new excellent items available.

So what of SAMS, the extra show to be held in April? Well, at the time of writing (Jan.94) we are currently being 'prepared' for (much?) higher taxes which will start to take effect in...yes, April.

Will this discourage people from travelling to SAMS? It remains to be seen but if you can make it I think you will find it worthwhile. You don't need to bring much money and you'll meet a lot of friendly people. Hope to see you there!

PUBLIC DOMAIN REVIEW

By Alan Hitchen

DRAW7 (XE) V2.0 PD67

At first glance you might think that this was just another simple art package for the 130XE, but you would be wrong. In fact it could be argued that this utility is too complicated for its own good. To give you some idea the B side of the disk has five documentation files containing over eleven thousand words of instruction, and the help screen that details the commands available has eight pages.

After loading, the program gives you the opportunity to read the documentation, or command list, before presenting you with a blank Graphics 15 screen and flashing cursor. It is a four colour program with 256 colours available from its palette. Your own choice of colours can be memorised and restored if changed.

Drawing is assisted by point, line, rubberband line, dotted line, wide line and ray commands. Also available are boxes, circles and ellipses in solid or outline form. Fill, inverse or undo the last change, even undo the undo, erase the whole screen, or just the current draw colour. Cursor size and speed can be adjusted. Text can be written in six sizes using any nine sector font, which can be inversed, multi-coloured or in 3D.

The whole picture can be moved up, down, left or right, with a wrap-around effect. The picture can be flipped left to right (ideal for an iron-on image) or upside down. Picture halves or quarters can be mirrored or duplicated horizontally or vertically. Halves can also be inverted.

Zoom mode can be enabled to work on a selected 1/32 area of the screen, or a zoom area can be duplicated to fill a whole screen. Zoom screens can be saved as a two sector Graphics 3 file for later use.

Perhaps the most unusual part of this package is the record facility. A large part of the documentation is given to explaining its capabilities. As your picture is being created you can record your actions and replay them, or save it to disk and replay it later. The recordings may be edited and added to, within memory limits. They can be replayed singly or chained together to create a slide show of the artist at work.

Pictures are saved as a standard 62 sector file, or as a horizontally compressed, Micro Illustrator format file. The pictures may be printed out directly from this program, but only if you have a C.Itoh Prowriter 8510. Other picture files in Graphics 8, 9, 10 and 11 can be loaded and viewed, but these can not be worked on.

Control is by Joystick, console keys and keyboard commands. This is a program with a lot of facilities, and so needs a lot of commands to control them. This requires the user to either have a good memory, or constantly refer to the command list, which I found to be irritating. Having said that I can't find much else to criticise, apart from a lack of an airbrush. Why not give it a try and see what you think?

A sample picture, zoom screen, font and several playback files are included in the package.

PUBLIC DOMAIN REVIEW

By Alan Hitchen

DIAGNOSTIC UTILITIES (PD68)

Side A is supplied with Index Solution 2.4, which is a rather neat menu system with a help screen and useful DOS facilities. It can launch Basic or Object files, read doc files, and print out directories. Once loaded you can swap to another disk as required. Pressing Reset will recall the menu.

First is a set of programs to check out hardware, some of which are rare items now: the 825 printer, 835 modem, 1020 plotter, 1025 printer and 1027 printer.

Next is DISEXER or Disk Control Utility. What it does exactly I can't say. It may have something to do with DOS 3 as it contains a reference to FMS.SYS.

TAPEXER is the 410/1010 Record Logic Exerciser, to check out your tape recorder, which should be used with reference to the 1010 manual.

SALT2.OBJ is the 400/800 Stand Alone System Tester V2.05, which seems to provide a comprehensive workout for the original operating system.

FLAWTEST.BAS is Disktest V3, which tests blank disks for flaws. It also gives the drive a good pounding at the same time.

RPMTEST.BAS is a drive speed tester, but as it is an American program it reads fast on 50Hz British drives, a reading of 348 RPM is therefore OK.

On the B side is DOSWIZ, which needs a translator to run on XL/XE machines. Suitable for single density Atari DOS disks only. DOSWIZ first checks your disk for valid files, deleted files, open files, chain errors, allocated sectors, free sectors, dead sectors, zero sectors and bad sectors. The directory section can Lock, Unlock, Delete, Rename, Recover deleted files and trace file sectors. The VTOC map display allows you to release allocated sectors, (be careful!) hide sectors from DOS, or zero and reclaim all dead sectors. Sectors can be viewed in Hex and ASCII and then can be individually zeroed, freed or allocated, so is good for zapping bad sectors. All free sectors can be zeroed to speed up duplication programs. The program comes complete with an informative doc file.

DISKASEM.OBJ is the DIS-KUTILITY, a sector editor that can work in single or true double density, single or double sided (XF551). It will display a complete DD sector on screen. It also offers assembly and disassembly facilities. It has a help screen of available commands. Full instructions and five add on facilities are available from the author, G. Nance.

BFLAS.OBJ is the Binary File Load Address Scanner V1.3.

PRTDRIVR.DSK & TAP are printer driver makers for AtariWriter, for disk and tape users respectively.

LABELS.BAS creates 3x1 inch mailing or disk labels. Manual entry of content is required for both.

THE VTOC AND ME, A CAUTIONARY TALE

By Alan Hitchen

The importance of the Volume Table Of Contents on a disk had never bothered me until the day it failed.

I was using an art package (DRAW7 - PD67) and I needed to save a picture. Not having a formatted disk to hand, I thought I could safely put it on the B side of the disk, where I knew there was space after the documentation. I then loaded Pixel Artist Deluxe (PD94) to use its airbrush facility on the picture, which loaded in OK. I then saved the altered picture back to the same disk as a different file. I then called the directory to check on free space only to be greeted by a display of garbage.

Using DOSWIZ (PD68) to examine the disk sector by sector, I could see that my first picture file had been written over the documentation. The second picture had also been written over the existing files as well as the VTOC and directory sectors, hence the garbage display when the directory was called. What had happened? After reading up on the subject I concluded that the VTOC must have been corrupted, probably when being duplicated, thus allowing access to a random selection of allocated sectors.

As I didn't have a backup of this disk I decided to try and salvage what I could. So first of all I had to rebuild the VTOC and directory sectors.

The VTOC lives in sector 360 and provides DOS with a map of sector allocation. Byte 0 should be 2 for a DOS 2.0/2.5 disk. Bytes 1 and 2 give the total sector count in HiLo format, which should be 707 or 1010 for enhanced density. Bytes 3 and 4 have the free sector count. From byte 10 to 99 is the sector map of a single density disk. Each Byte contains the status of eight sectors. Instead of working it out I filled the table with zeroes to allocate all sectors. Then I used DOSWIZ to free the unused sectors.

Next is the directory which can be found in sectors 361 to 368. After clearing out the garbage I re-entered the information, using Diskmend. Each entry has sixteen bytes. Byte 0 is the status byte and in this case had the value 66, it would be 98 for a locked file. Other possible values are 3 for a file using sectors 721 upward, 35 is the same but locked. 128 denotes a deleted file. Bytes 1 and 2 have the sector length count. Bytes 3 and 4 have the first sector number. Bytes 5 to 12 hold the file name, and 13 to 15 holds the extender.

Although I could have recovered the picture files, I decided it wasn't worth it. So I then went through the files sector by sector, using a Diskmend option to repair the sector chains. I then used the sector trace facility to check if all was well. After re-adjusting the directory to correct my initial guesses, my repair was complete. Needless to say large chunks of the documentation have been lost but enough remains to get by with pending a replacement.

Additional Information:

The VTOC of an enhanced density disk continues in sector 1024, where bytes 0 to 121 represent sectors 48 to 1023. Bytes 122 and 123 hold the additional number of free sectors available up to a maximum of 303 (303 + 707 = 1010).

DEMO MAKER & EDIT 7 REVIEW

By Alan Hitchen

This new commercial disk from Richard Gore, (DGS order no. 1015) is a collection of programs designed to help you create a scrolling message demo similar to those favoured by our European friends. Naturally the finished product is not quite as sophisticated, but it enables those with little programming skill to produce a demo with the minimum of effort, and more advanced users can easily add embellishments.

The creative programs are written in Turbo Basic, so an XL/XE is required. However, a standard Basic demo can be created that will run on any 48K machine. The disk is supplied with a comprehensive 12 page manual, and a sample demo is supplied to show you what can be achieved.

To create a demo of your own, start with a blank formatted disk, add DOS files and Turbo Basic if required. Next copy the appropriate demo files from the master disk. The Autorun, Demo and Font files form the bare bones of the demo.

Next boot up Edit 7. This is an art program that will help you create the picture for the demo. It looks fairly basic, but it does have a good range of features. On a 130XE it will load a help screen into the RAMdisk. Text can also be added to the picture, using the standard font, or any other. Five fonts are supplied, as are two sample pictures. Also included is a loader to allow you to use these pictures in your own programs. Having created a picture, save it to the demo disk.

Now boot up the Demo Maker. This program creates the scrolling message. It is limited to 1968 characters in length. My first attempt exceeded this limit, and editing the message took some time. I would advise writing it out first to ensure it will fit. When finished the scroll can then be checked at various speeds. The message can then be saved out as a text file that can be re-loaded at a later date if changes are needed. When you are satisfied, the program will create two data files that the Demo program will use. These are added to the demo disk.

Having created your picture and scrolling message, all that remains is to customise the Demo program. The minimum requirement is that you insert the appropriate names for your picture and scroll files where indicated. However, you can also change the size of the scroll, the speed of the scroll, and the colour of the scroll. Finally you can add music. Two music programs are supplied in LISTed format, so that they can be merged with the main program. Don't forget to save the modified program back to your demo disk.

All you need do now is boot the disk. The Turbo version loads in 45 seconds, while the standard version takes 85 seconds. You should then be rewarded with your picture, a scroll running underneath, with some background music. As I said at the beginning, it may not produce the most stunning demo you have ever seen, but it is a good utility that is quick and easy to use even for a novice. The hardest part is thinking up the content you will use. Richard will be assembling a disk of the best demos created with this utility if there is sufficient response.